

**To:** Leinenbach, Peter[Leinenbach.Peter@epa.gov]; Wu, Jennifer[Wu.Jennifer@epa.gov]; Carlin, Jayne[Carlin.Jayne@epa.gov]; Rueda, Helen[Rueda.Helen@epa.gov]  
**From:** MICHIE Ryan  
**Sent:** Wed 4/10/2013 12:49:11 AM  
**Subject:** RE: Landsat Project re think  
Landsat Project Description 2013 04 09.docx

Thanks Peter,

If you guys have any other thoughts about how to structure the landsat project let me know. I'm leaning toward reducing the project scope in Part B dramatically. Here's the attached project proposal with Part B reduced. Let me know what you think.

As far as the other project idea. Basically it would involve downloading all available precipitation data and snow depth data from the various climate data sources (COOP, NCDC, RAWs, etc) for the year 1996 in Western Oregon and SW Washington. From there they would determine the maximum 24 hour rainfall (in 1996) accounting for and including the snow to liquid rain equivalent. The next step would be to interpolate the max 24 hour precipitation into a raster and contour lines.

This data will allow us to calculate the intensity of the 1996 storms as a percent of the normal 100 year 24hour rainfall amount.

This is needed for the landslide analysis because our calibration approach is using landslide inventory data that was collected after the 1996 storms and will allow us to determine the spatial variability of rainfall and test how this relates to the observed landslide density and vegetation conditions. Theoretically it will help us develop a design storm standard for which BMPs can be developed against and maybe a way to predict landslide density under different scenarios (slope, landform type, veg conditions, and rainfall).

**From:** Leinenbach, Peter [mailto:Leinenbach.Peter@epa.gov]  
**Sent:** Tuesday, April 09, 2013 3:29 PM  
**To:** MICHIE Ryan; Wu, Jennifer; Carlin, Jayne; Rueda, Helen  
**Cc:** Leinenbach, Peter  
**Subject:** RE: Landsat Project re think

Ryan –

I can to the exact same conclusion – I think Landfire does are really good job. I think the Landfire disturbance datasets (1999 through 2008) could be used in combination with the NWFP 1972 through 2002 disturbance dataset to get to the harvest history around this area. That is, Landfire data can be used as recent and annual data, and the NWFP data can be used to show the historic data (note – you can break the NWFP data into other time periods, for example 1972 through 2000).

I think it work so well is that forest harvest in this area is very large clearcuts and they can be 'seen' by the satellite data.

I have attached some images to show how well it works (BTW – there has been a lot of harvest in these watersheds over the past 40 years). Just a note Ryan – It looks like the landfire data seem to have some sort of historic harvest (these are indicated by the yellow and purple color areas in these images. I do not know the codes for this dataset, so I do not exactly what these areas indicate. The other colors associated with the landfire data seem to go a good job.

**From:** MICHIE Ryan [<mailto:Michie.Ryan@deq.state.or.us>]  
**Sent:** Tuesday, April 09, 2013 2:54 PM  
**To:** Wu, Jennifer; Carlin, Jayne  
**Cc:** Leinenbach, Peter  
**Subject:** FW: Landsat Project re think

Just resending because I accidently sent this to Peter's private email account. Sorry Peter.

**From:** MICHIE Ryan  
**Sent:** Tuesday, April 09, 2013 2:45 PM  
**To:** 'wu.jennifer@epa.gov'; 'carlin.jayne@epa.gov'  
**Cc:** 'peter leinenbach'; SEEDS Joshua  
**Subject:** Landsat Project re think

Hi Guys,

I'm having some second thoughts on the landsat project.

After our discussion last week with CADMUS Peter forwarded me information on the LANDFIRE project. LANDFIRE is a federal interagency vegetation, fire/fuels mapping program. They have developed disturbance rasters (that include clear cuts) based on Landsat.

I've been looking at their disturbance products and I think it would satisfy the data needs we have for the years (1999-2008). There is a USFS product that is similar for years prior to 1999 that is good (and would work) but not exactly a perfect fit.

I'd hate to have federal money spent on an effort to produce something when these other products would probably work ok for the majority of years. We would still need data processed for years 2009, 2011, and 2012, however.

I'm wondering your thoughts on scaling the project down to just have CADMUS complete the methods document (Part A) and the processing for just the years mentioned above (Part B)?

OR...

Not doing Part B at all (I will do it) and use the money for something else. If you're looking for other project ideas I have at least one more that is more straight forward.

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Ryan Michie

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